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(21)Application number : 09-172633 (71)Applicant : SONY CORP

(22)Date of filing : 27.06.1997 (72)Inventor : WATANABE KOICHIRO

(54) TELEVISION RECEIVER, VIDEO/AUDIO SIGNAL RECORDING DEVICE AND VIDEO/AUDIO SIGNAL RECORDING AND REPRODUCING DEVICE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a television receiver, a video/audio signal recording device and a video/audio signal recording and reproducing device in which reservation of program reception and reservation of video recording are set by a user's simple declaration to watch a program again in the case that a serial program broadcast periodically or aperiodically is viewed by the user until its end.

SOLUTION: A character superimposing section 103 superimposes character information for confirming a program onto a video audio signal and a video audio signal output section 104 provides an output of the resulting signal at the end of the program received by a television broadcast reception section 102 based on a acknowledgment output by a program recognition section 108. Then a control section 105 controls the television broadcast reception section 102 and the character superimposing section 103 so that the program is reserved in response to program reservation setting information received by an entry section 107, a television broadcast program to be reserved is received based on current time information given from a clock section 106 and a acknowledgment output by the program acknowledgment section 108, and the video audio signal output section 104 provides

an output of a video audio signal of the reserved program.

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CLAIMS

[Claim(s)]

[Claim 1] A receiving means to receive television broadcasting, and an alphabetic character superposition means to superimpose text on the image sound signal of the television broadcasting received by the above-mentioned receiving means, An output means to output the image sound signal of the television broadcasting received by the above-mentioned receiving means, A program recognition means to recognize initiation and termination of a program, and a clock means to output current time information, It has the control means which controls the above-mentioned receiving means and an alphabetic character superposition means, and an input means for inputting setting-out information into the above-mentioned control means. The above-mentioned control means It is based on the recognition output by program recognition means to recognize initiation and termination of a program. Superimpose the text for the reservation check of the program on an image sound signal with the above-mentioned alphabetic character superposition means, and it is made to output from an output means at the time of termination of a program. The program is reserved according to the program reservation setting-out information that it is inputted by the above-mentioned input means. The television broadcasting of the

reserved program is received based on the recognition output by the current time information and the above-mentioned program recognition means which are given by the above-mentioned clock means. The television receiving set characterized by controlling the above-mentioned receiving means and an alphabetic character superposition means to output the image sound signal of a reservation program from the above-mentioned output means.

[Claim 2] The above-mentioned control means is a television receiving set according to claim 1 characterized by reserving the program according to the program reservation setting-out information that superimpose the text for the reservation check of the program on an image sound signal with the above-mentioned alphabetic character superposition means, make it output from an output means, and it is inputted by the above-mentioned input means when the program which is carrying out current reception is completed.

[Claim 3] The above-mentioned control means is a television receiving set according to claim 1 characterized by reserving the program according to the program reservation setting-out information that superimpose the text for the reservation check of the program on an image sound signal with the above-mentioned alphabetic character superposition means, make it output from an output means, and it is inputted by the above-mentioned input means when the program which was carrying out program reservation is completed.

[Claim 4] The program which received the above-mentioned control means once according to the program reservation setting-out information that it is inputted by the above-mentioned input means is a television receiving set according to claim 1 characterized by carrying out program reservation automatically.

[Claim 5] The program in which the above-mentioned control means carried out program reservation once according to the program reservation setting-out information that it is inputted by the above-mentioned input means is a television receiving set according to claim 1 characterized by carrying out program reservation automatically.

[Claim 6] The above-mentioned program recognition means is a television receiving set according to claim 1 characterized by consisting of a program information acquisition means to acquire program information, and a program information storage means to memorize the program information acquired with the above-mentioned program information acquisition means.

[Claim 7] A receiving means to receive television broadcasting, and an alphabetic character superposition means to superimpose text on the image sound signal of the television broadcasting received by the above-mentioned receiving means, An output means to output the image sound signal of the television broadcasting received by the above-mentioned receiving means, A record means to record the image sound signal of the television broadcasting received by the above-mentioned receiving means on a record medium, A program recognition means to recognize initiation and termination

of a program, and a clock means to output current time information, It has the control means which controls the above-mentioned receiving means and an alphabetic character superposition means, and an input means for inputting setting-out information into the above-mentioned control means. The above-mentioned control means It is based on the recognition output by program recognition means to recognize initiation and termination of a program. Superimpose the text for the reservation check of the program on an image sound signal with the above-mentioned alphabetic character superposition means, and it is made to output from an output means at the time of termination of a program. Image transcription reservation of the program is performed according to the image transcription reservation setting-out information that it is inputted by the above-mentioned input means. Based on the recognition output by the current time information and the above-mentioned program recognition means which are given by the above-mentioned clock means, the television broadcasting of a program by which image transcription reservation was carried out is received. The image sound signal recording device characterized by controlling the above-mentioned receiving means, an alphabetic character superposition means, and a record means to record on a record medium with the above-mentioned storage means.

[Claim 8] The above-mentioned control means is an image sound signal recording device according to claim 7 carried out [carrying out image transcription reservation of the program, and] as the description according to the image transcription reservation setting-out information that superimpose the text for the reservation check of the program on an image sound signal with the above-mentioned alphabetic character superposition means, make it output from an output means, and it is inputted by the above-mentioned input means when the program which is carrying out current reception is completed.

[Claim 9] The above-mentioned control means is the image sound signal recording device according to claim 7 carry out carrying out image transcription reservation of the program as the description according to the image transcription reservation setting-out information that superimpose the text for the reservation check of the program on an image sound signal with the above-mentioned alphabetic character superposition means, make it output from an output means, and it is inputted by the above-mentioned input means when the program which was carrying out image transcription reservation is completed.

[Claim 10] The program which received the above-mentioned control means once according to the image transcription reservation setting-out information that it is inputted by the above-mentioned input means is an image sound signal recording device according to claim 7 characterized by carrying out image transcription reservation automatically.

[Claim 11] The program in which the above-mentioned control means carried out image transcription reservation once according to the image transcription reservation

setting-out information that it is inputted by the above-mentioned input means is an image sound signal recording device according to claim 7 characterized by carrying out image transcription reservation automatically.

[Claim 12] The above-mentioned program recognition means is an image sound signal recording device according to claim 7 characterized by consisting of a program information acquisition means to acquire program information, and a program information storage means to memorize the program information acquired with the above-mentioned program information acquisition means.

[Claim 13] A receiving means to receive television broadcasting, and the record playback means which carries out record playback of the image sound signal of the television broadcasting received by the above-mentioned receiving means through a record medium, An alphabetic character superposition means to superimpose text on the image sound signal reproduced from the record medium by the above-mentioned record playback means, An output means to output the image sound signal reproduced from the record medium by the above-mentioned record playback means, A timed recording program information storage means to memorize the information on the program whose timed recording was made, and a clock means to output current time information, It has the control means which controls the above-mentioned receiving means, a record playback means, and an alphabetic character superposition means, and an input means for inputting setting-out information into the above-mentioned control means. The above-mentioned control means It is based on the information on the program which is memorized by the above-mentioned timed recording program information storage means and whose timed recording was made. At the time of termination of the program which is reproduced from the record medium with the above-mentioned record playback means and whose timed recording was made Superimpose the text for the reservation check of the program on the image sound signal reproduced by the above-mentioned record playback means with the above-mentioned alphabetic character superposition means, and it is made to output from the above-mentioned output means. Image transcription reservation of the program is performed according to the image transcription reservation setting-out information that it is inputted by the above-mentioned input means. Based on the program information which is memorized by the current time information and the above-mentioned timed recording program information storage means which are given by the above-mentioned clock means and whose timed recording was made, the television broadcasting of a program by which image transcription reservation was carried out is received. The image sound signal record regenerative apparatus characterized by controlling the above-mentioned receiving means, an alphabetic character superposition means, a storage means, and a record playback means to memorize the information on the program whose timed recording was made for the above-mentioned timed recording program information storage means while recording on a record medium with the above-mentioned record playback means.

[Claim 14] The timed recording program which reproduced the above-mentioned control means once according to the image transcription reservation setting-out information that it is inputted by the above-mentioned input means is an image sound signal record regenerative apparatus according to claim 13 characterized by carrying out image transcription reservation automatically.

[Claim 15] The program in which the above-mentioned control means carried out image transcription reservation once according to the image transcription reservation setting-out information that it is inputted by the above-mentioned input means is an image sound signal record regenerative apparatus according to claim 13 characterized by carrying out image transcription reservation automatically.

[Claim 16] It has a program information acquisition means to acquire program information, and a program information storage means to memorize the program information acquired with the above-mentioned program information acquisition means. The above-mentioned control means According to the image transcription reservation setting-out information that it was inputted by the above-mentioned input means, image transcription reservation is performed using the race card memorized by the above-mentioned race card storage means. It is based on the race card memorized by the current time information and the above-mentioned race card storage means which are given by the above-mentioned clock means. The image sound signal record regenerative apparatus according to claim 13 characterized by controlling the above-mentioned receiving means and a record playback means to extract the program by which image transcription reservation was carried out, and to record on a record medium.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] It is related with the television receiving set which has the program reservation function which receives and displays the program of the channel specified as the time amount specified beforehand, the image sound signal recording device which has the image transcription reservation function to receive and record on videotape the program of the channel specified as the time amount specified beforehand, and an image sound signal record regenerative apparatus.

[0002]

[Description of the Prior Art] Image transcription reservation and program reservation (1) in the video tape recorder (VTR) and television receiver which were conventionally equipped with the timer reservation function It goes into timer reservation mode.

[0003] (2) Set the week and day of the week of initiation.

[0004] (3) Set the time of initiation.

[0005] (4) Set the part of initiation.

[0006] (5) Set the time of termination.

[0007] (6) Set the part of termination.

[0008] (7) Set a reservation channel.

[0009] (8) Perform timer reservation.

[0010] It was performed by ** (1) thru/or the process procedure of (8). And using the rise switch and the down switch, one digit was made to fluctuate at a time, or input units, such as a ten key switch and a bar code, were used for the set of the numeric value in the above (2) thru/or (7) processes. Moreover, when reserving the program broadcast at every day or the time of day same every week, he was trying to repeat and use the reservation information on the program by declaring the purport reserved each time.

[0011]

[Problem(s) to be Solved by the Invention] By the way, conventionally, the user needed to look at the race card etc. for the image transcription reservation and program reservation in a video tape recorder (VTR) and a television receiver equipped with the timer reservation function, and needed to carry out complicated actuation of inputting information required for setting out to them.

[0012] The object of this invention is to offer a television receiving set equipped with the function which carries out program reservation of the program which the user received to the last once simply.

[0013] Moreover, other objects of this invention are to offer an image sound signal recording device equipped with the function which carries out image transcription reservation of the program which the user received to the last once simply.

[0014] Furthermore, other objects of this invention are to offer an image sound signal record regenerative apparatus equipped with the function which carries out program reservation of the program which the user made the timed recording of and was once reproduced from the record medium to the last simply.

[0015]

[Means for Solving the Problem] A receiving means by which the television receiving set concerning this invention receives television broadcasting, An alphabetic character superposition means to superimpose text on the image sound signal of the television broadcasting received by the above-mentioned receiving means, An output means to output the image sound signal of the television broadcasting received by the above-mentioned receiving means, A program recognition means to recognize initiation and termination of a program, and a clock means to output current time information, It has the control means which controls the above-mentioned receiving means and an alphabetic character superposition means, and an input means for inputting setting-out information into the above-mentioned control means. By the

above-mentioned control means It is based on the recognition output by program recognition means to recognize initiation and termination of a program. Superimpose the text for the reservation check of the program on an image sound signal with the above-mentioned alphabetic character superposition means, and it is made to output from an output means at the time of termination of a program. The program is reserved according to the program reservation setting-out information that it is inputted by the above-mentioned input means. It is characterized by receiving the television broadcasting of the reserved program based on the recognition output by the current time information and the above-mentioned program recognition means which are given by the above-mentioned clock means, and controlling the above-mentioned receiving means and an alphabetic character superposition means to output the image sound signal of a reservation program from the above-mentioned output means.

[0016] Moreover, the image sound signal recording device concerning this invention A receiving means to receive television broadcasting, and an alphabetic character superposition means to superimpose text on the image sound signal of the television broadcasting received by the above-mentioned receiving means, An output means to output the image sound signal of the television broadcasting received by the above-mentioned receiving means, A record means to record the image sound signal of the television broadcasting received by the above-mentioned receiving means on a record medium, A program recognition means to recognize initiation and termination of a program, and a clock means to output current time information, It has the control means which controls the above-mentioned receiving means and an alphabetic character superposition means, and an input means for inputting setting-out information into the above-mentioned control means. By the above-mentioned control means It is based on the recognition output by program recognition means to recognize initiation and termination of a program. Superimpose the text for the reservation check of the program on an image sound signal with the above-mentioned alphabetic character superposition means, and it is made to output from an output means at the time of termination of a program. Image transcription reservation of the program is performed according to the image transcription reservation setting-out information that it is inputted by the above-mentioned input means. It is characterized by receiving the television broadcasting of a program by which image transcription reservation was carried out based on the recognition output by the current time information and the above-mentioned program recognition means which are given by the above-mentioned clock means, and controlling the above-mentioned receiving means, an alphabetic character superposition means, and a record means to record on a record medium with the above-mentioned storage means.

[0017] Furthermore, the image sound signal record regenerative apparatus concerning this invention A receiving means to receive television broadcasting, and the record playback means which carries out record playback of the image sound signal of the

television broadcasting received by the above-mentioned receiving means through a record medium, An alphabetic character superposition means to superimpose text on the image sound signal reproduced from the record medium by the above-mentioned record playback means, An output means to output the image sound signal reproduced from the record medium by the above-mentioned record playback means, A timed recording program information storage means to memorize the information on the program whose timed recording was made, and a clock means to output current time information, It has the control means which controls the above-mentioned receiving means, a record playback means, and an alphabetic character superposition means, and an input means for inputting setting-out information into the above-mentioned control means. By the above-mentioned control means It is based on the information on the program which is memorized by the above-mentioned timed recording program information storage means and whose timed recording was made. At the time of termination of the program which is reproduced from the record medium with the above-mentioned record playback means and whose timed recording was made Superimpose the text for the reservation check of the program on the image sound signal reproduced by the above-mentioned record playback means with the above-mentioned alphabetic character superposition means, and it is made to output from the above-mentioned output means. Image transcription reservation of the program is performed according to the image transcription reservation setting-out information that it is inputted by the above-mentioned input means. Based on the program information which is memorized by the current time information and the above-mentioned timed recording program information storage means which are given by the above-mentioned clock means and whose timed recording was made, the television broadcasting of a program by which image transcription reservation was carried out is received. While recording on a record medium with the above-mentioned record playback means, it is characterized by controlling the above-mentioned receiving means, an alphabetic character superposition means, a storage means, and a record playback means to memorize the information on the program whose timed recording was made for the above-mentioned timed recording program information storage means.

[0018]

[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained to a detail with reference to a drawing.

[0019] Drawing 1 is the block diagram showing an example of the television receiving set 100 which applied this invention.

[0020] The television receiving set 100 shown in this drawing 1 comes to have the television-broadcasting receive section 102 which receives television broadcasting through an antenna 101, the alphabetic signal superposition section 103 connected to this television-broadcasting receive section 102, the image sound signal output section 104 connected to this alphabetic signal superposition section 103, the control

section 105 which controls the above-mentioned television-broadcasting receive section 102 and the alphabetic signal superposition section 103, and the clock section 106, the input section 107 and the program recognition section 108 connected to this control section 105.

[0021] In this television receiving set 100, based on the control instruction from a control section 105, the television broadcasting receive section 102 receives television broadcasting through an antenna 101, and supplies the image sound signal which restored to them and amplified the target video signal and target sound signal (henceforth an image sound signal) of television broadcasting to the alphabetic signal superposition section 103.

[0022] Moreover, the alphabetic signal superposition section 103 generates the alphabetic signal which shows the text for a program reservation check with a character generator based on the control instruction from a control section 105, and superimposes an alphabetic signal on the video signal of television broadcasting to have been received by the above-mentioned television broadcasting receive section 102.

[0023] The image sound signal output section 104 connected to this alphabetic signal superposition section 103 outputs the image sound signal of television broadcasting to have been got by the television broadcasting receive section 102, and consists of a video monitor equipped with sound signal output units, such as a loudspeaker.

[0024] Moreover, the clock section 106 gives current time information to a control section 105. The input section 107 gives the setting-out information according to actuation of a user to a control section 105. In addition, although a key boat, a remote controller, etc. are used, if it is a means to input a viewer's volition, as the above-mentioned input section 107, it cannot be overemphasized that what kind of other means may be used.

[0025] Furthermore, the program recognition section 108 recognizes initiation and termination of a program, and gives the program initiation information and program termination information to a control section 105.

[0026] It has the race card acquisition section 181 and the race card storage section 182, and this program recognition section 108 becomes, as shown in drawing 2 . The program recognition section 108 memorizes the program information on the race card which acquired the race card by the race card acquisition section 181 in the race card storage section 182, and supplies program information to the above-mentioned control section 105 with the instruction from a control section 105. As an approach of acquiring a race card in the above-mentioned race card acquisition section 181 Although there is the approach of acquiring by superimposing and transmitting the approach and program information which access the server which has the information on a program using networks, such as the approach of acquiring from external electronic media, such as CDROM, or the Internet, and are acquired to a television signal, and decoding it etc. In order that it can be decided that a program will be a

meaning and it may carry out image transcription reservation, as long as it is sufficient information, i.e., the identifier of a program, start time, end time, and the approach of acquiring a broadcast channel, you may be what kind of other approaches.

[0027] A control section 105 consists of a microcomputer and detects initiation and termination of a program by giving the above-mentioned program information based on the information on the channel which is carrying out current reception by the television broadcasting receive section 102, and the current time information given by the clock section 106.

[0028] Although a race card is acquired beforehand and he is trying to judge initiation and termination of a program from current time and a current receiving channel, you may make it character recognition peculiar to the time of the feature extraction of the video signal of a program or a sound signal, initiation of a program, or termination etc. judge program termination here, without using a race card.

[0029] And a control section 105 controls the above-mentioned television broadcasting receive section 102 and the alphabetic signal superposition section 103 according to the procedure of the processing algorithm shown in drawing 3 based on the current time information given by the clock section 106, the setting-out information given from the input section 107, the disclosure information on the program given by the program recognition section 108, and termination information.

[0030] That is, the above-mentioned control section 105 judges whether the end time of the program which is carrying out current reception based on the current time information given by the clock section 106 in step S101 while the television broadcasting receive section 102 receives a desired television broadcasting program, the initiation information on the program given by the program recognition section 108, and termination information came first. And if the judgment result in step S101 becomes "YES, i.e., end time," it moves to processing of step S102 and the judgment result has not become "NO, i.e., end time," judgment processing of this step S101 is repeated, and it waits for termination of the deed said program.

[0031] At step S102, the alphabetic signal which controls the alphabetic signal superposition section 103 and shows the text for a program reservation check is generated, and the message which demands decision making of whether to watch "this program of next week" of the program ended now next time also from a viewer as shown, for example in drawing 4 is displayed by the image sound signal output section 104.

[0032] By the message shown in this drawing 4, if you watch "this program of next week" of the program ended now and "1" will not be seen again, what "0" should be inputted for from the input section 107 will be urged. In addition, as long as it can urge the input of the information on decision making of whether to watch "this program of next week" of the program ended now, the content of the message may be what kind of thing.

[0033] At the following step S103, it judges whether he watches next time also, a

viewer's volition, i.e., "this program of next week", shown as setting-out information inputted when the viewer who looked at the above-mentioned message operates the input section 107. and -- if the judgment result in step S103 looks at "YES, i.e., "this program of next week", " next time also -- step S104 -- moving -- moreover, a judgment result -- "NO" -- that is, if it does not see, it will return to the above-mentioned step S101, and will wait for termination of the following program.

[0034] Furthermore, at step S104, program reservation of the program of the next week of the same time amount is carried out as "this program of next week" by the same channel as the program, and it returns to the above-mentioned step S101.

[0035] And the television broadcasting of a program by which program reservation is carried out by doing in this way is received automatically, and the television broadcasting receive section 102 and the image sound signal output section 104 are controlled by this television receiving set 100 by the control section 105 to output that image sound signal from the image sound signal output section 104.

[0036] Program reservation can carry out easily only by performing actuation of inputting the setting-out information which shows the volition of a viewer looking at the message a user, i.e., a viewer, urges decision making of whether watching "this program of next week" of the program ended now display at the time of termination of a program next time also to a viewer in such a television receiving set 100 of a configuration, and operating the input section 107 and watching "this program of next week" next time also. That is, in this television receiving set 100, when you watch to the last broadcast of one batch of the continuation program broadcast periodically weekly, program reservation of the "this program of next week" of that program can be carried out easily.

[0037] here -- this television receiving set 100 -- setting -- the channel as a certain program with same "this program of next week" -- it is the thing of the program of the next week of the same time amount, and the same program and the program of the same channel are reserved because possibility of broadcasting the next time of that program to the same time amount by the same channel is high in continuation broadcast.

[0038] Although the function to perform program reservation about the continuation program broadcast periodically weekly is realized in this television receiving set 100 since program reservation of "this program of next week" is performed The program information on the race card which is memorized by the control section 105 at the race card storage section 182 of the program recognition section 108 in processing program reservation of the above-mentioned step S104 is analyzed. Program reservation about the continuation program broadcast irregularly can also be performed by extracting the broadcast time of the next time of the program, and carrying out program reservation of the program automatically. The program information on the race card acquired by the race card acquisition section 181 is memorized in the race card storage section 182. In this case, by the control section

105 According to the reservation setting-out information that it is inputted from the input section 107, program reservation is automatically performed using the race card memorized by the above-mentioned race card storage section 182. The program by which program reservation was carried out based on the program information memorized by the current time information and the above-mentioned race card storage section 182 which are given by the clock section 106 is extracted. The above-mentioned television broadcasting receive section 102 and the image sound signal output section 104 are controlled to receive the television broadcasting of a program by which program reservation was carried out, and to output from the above-mentioned image sound signal output section 104.

[0039] Moreover, although it was made to output the message which stimulates decision making of program reservation in this television receiving set 100 whenever the received program was completed, it may be made to perform the processing algorithm shown in above-mentioned drawing 3 only at the time of reception of the program, i.e., the program by which program reservation was carried out, which he is going to watch more positively.

[0040] furthermore, with the processing algorithm shown in above-mentioned drawing 3 Like [although the setting-out information which shows whether "this program of next week" (next time) of the program is reserved must be inputted whenever a program is completed] the processing algorithm shown, for example in drawing 5 The program once received till termination because the program once received till termination performs setting out which surely carries out program reservation of the next time of the program can carry out program reservation of the next time of the program automatically. In this case, setting out of whether the program once received till termination surely carries out program reservation of the next time of that program is performed when a viewer operates the input section 107, and that setting-out information is given to a control section 105 from the above-mentioned input section 107.

[0041] That is, it judges whether first, in step S111, while the television broadcasting receive section 102 received the desired television broadcasting program, the end time of the program received now based on the current time information given by the clock section 106, the initiation information on the program given by the program recognition section 108, and termination information came by the processing algorithm shown in drawing 5 . And if the judgment result in step S111 becomes "YES, i.e., end time," it moves to processing of step S112 and the judgment result has not become "NO, i.e., end time," judgment processing of this step S111 is repeated, and it waits for termination of the deed said program.

[0042] At step S112, the program once received till termination judges whether setting out which surely carries out program reservation of the next time of the program is made. If it is setting out which surely carries out program reservation of the next time of the program, it will move from the program which the judgment result

received till termination "YES, i.e., once," to step S115. Moreover, if the program which the judgment result received till termination "NO, i.e., once," is not setting out which surely carries out program reservation of the next time of the program, it will move to step S113.

[0043] At step S113, the alphabetic signal which controls the alphabetic signal superposition section 103 and shows the text for a program reservation check is generated, and the message which demands decision making of whether to watch the program ended now next time also from a viewer as shown, for example in drawing 6 is displayed by the image sound signal output section 104. By the message shown in this drawing 6, if the next time of the program ended now is seen and "1" will not be seen again, what "0" should be inputted for from the input section 107 will be urged.

[0044] At the following step S114, it judges whether he watches the program ended a viewer's volition, i.e., now, shown as setting-out information inputted when the viewer who looked at the above-mentioned message operates the input section 107 next time also. and -- if the judgment result in step S114 sees "YES, i.e., next time," -- step S115 -- moving -- moreover, a judgment result -- "NO" -- that is, if it does not see, it will return to the above-mentioned step S111, and will wait for termination of the following program.

[0045] Furthermore, at step S115, the program information on the race card memorized by the race card storage section 182 of the program recognition section 108 is analyzed, the broadcast time of the next time of the program is extracted, program reservation of the program is carried out automatically, and it returns to the above-mentioned step S111.

[0046] The program information on the race card acquired by the race card acquisition section 181 is memorized in the race card storage section 182. And by the control section 105 According to the reservation setting-out information that it is inputted from the input section 107, program reservation is automatically performed using the race card memorized by the above-mentioned race card storage section 182. The program by which program reservation was carried out based on the program information memorized by the current time information and the above-mentioned race card storage section 182 which are given by the clock section 106 is extracted. The above-mentioned television broadcasting receive section 102 and the image sound signal output section 104 are controlled to receive the television broadcasting of a program by which program reservation was carried out, and to output from the above-mentioned image sound signal output section 104.

[0047] Next, drawing 7 is the block diagram showing an example of the image sound signal recording apparatus 200 which applied this invention.

[0048] The image sound signal recording device 200 shown in this drawing 7 With the television broadcasting receive section 202 which receives television broadcasting through an antenna 201 The alphabetic signal superposition section 203 connected to this television broadcasting receive section 202, The image sound signal output

section 204 connected to this alphabetic signal superposition section 203, While having the control section 205 which controls the above-mentioned television broadcasting receive section 202 and the alphabetic signal superposition section 203, and the clock section 206, the input section 207 and the program recognition section 208 which were connected to this control section 205 It comes to have the image sound signal Records Department 209 connected to the above-mentioned television broadcasting receive section 202.

[0049] The image sound signal Records Department 209 records the video signal and sound signal which are supplied from the television broadcasting receive section 202 on a record medium 210 based on the control instruction from a control section 205. In addition, the program recognition section 208 memorizes the program information on the race card which acquired the race card by the race card acquisition section 281 in the race card storage section 282, and supplies program information to the above-mentioned control section 205 with the instruction from a control section 205.

[0050] Since this image sound signal recording apparatus 200 is what established the image sound signal Records Department 209 in the television receiving set 100 shown in drawing 1 and components other than image sound signal Records Department 209 of it are the same as that of the above-mentioned television receiving set 100, that detailed explanation is omitted.

[0051] And the control section 205 in this image sound signal recording device 200 controls the above-mentioned television broadcasting receive section 202, the alphabetic signal superposition section 203, and the image sound signal Records Department 209 according to the procedure of the processing algorithm shown in drawing 8 based on the current time information given by the clock section 206, the setting-out information given from the input section 207, and the program information given by the program recognition section 208.

[0052] That is, the above-mentioned control section 205 judges whether the end time of the program which is carrying out current reception based on the current time information given by the clock section 206 in step S201 while the television broadcasting receive section 202 receives a desired television broadcasting program, and the program information given by the program recognition section 208 came first. And if the judgment result in step S201 becomes "YES, i.e., end time," it moves to processing of step S202 and the judgment result has not become "NO, i.e., end time," judgment processing of this step S201 is repeated, and it waits for termination of the deed said program.

[0053] At step S202, the alphabetic signal which controls the alphabetic signal superposition section 203 and shows the text for an image transcription reservation check is generated, and the message which demands decision making of whether to record on videotape the next time of the program ended now from a viewer as shown, for example in drawing 9 is displayed by the image sound signal output section 204.

[0054] By the message shown in this drawing 9 , if image transcription reservation of

the next time of the program ended now is carried out and image transcription reservation of "1" will not be carried out again, what "0" should be inputted for from the input section 207 will be urged. In addition, as long as it can carry out image transcription reservation, and it can carry out next time of the program ended now or it can urge the input of the information on decision making of no, the content of the message may be what kind of thing.

[0055] The volition [the following step S203] of the viewer shown as setting-out information inputted when the viewer who looked at the above-mentioned message operates the input section 207, i.e., it judges whether image transcription reservation is carried out. and the judgment result in step S203 -- "YES" -- namely, -- if image transcription reservation is carried out -- step S204 -- moving -- moreover, a judgment result -- "NO" -- that is, if image transcription reservation is not carried out, it will return to the above-mentioned step S201, and will wait for termination of the following program.

[0056] Furthermore, at step S204, the program information on the race card memorized by the race card storage section 282 of the program recognition section 208 is analyzed, the broadcast time of the next time of the program ended now is extracted, program reservation of the program is carried out automatically, and it returns to the above-mentioned step S201.

[0057] And the television broadcasting of a program by which image transcription reservation is carried out by doing in this way is received automatically, and the television broadcasting receive section 202 and the image sound signal Records Department 209 are controlled by this image sound signal recording apparatus 200 by the control section 205 to record that image sound signal on a record medium 210.

[0058] A viewer can see the message a user, i.e., a viewer, urges to a viewer decision making of whether to carry out image transcription reservation of the next time for the program ended now displayed at the time of termination of a program in such the image sound signal recording device 200 of a configuration, and image transcription reservation can carry out easily only at carry out actuation of input the setting out information which shows the volition which operates the input section 207 and carries out image transcription reservation of the next time of the program. That is, in this image sound signal recording device 200, when you watch to the last broadcast of one batch of the continuation program broadcast periodically or irregularly, image transcription reservation of the next time of that program can be carried out easily.

[0059] in addition -- since possibility of broadcasting the next time of the program to the same time amount by the same channel is high in continuation broadcast -- the channel same to that of image transcription reservation of the next time of a certain program as "this program of next week, i.e., the program," -- it may be made to carry out image transcription reservation of the program of the next week of the same time amount. Thereby, the processing for image transcription reservation can be simplified.

[0060] Although it was made to output the message which stimulates decision making

of image transcription reservation in this image sound signal recording device 200 whenever the received program was completed, it may be made to perform the processing algorithm shown in above-mentioned drawing 8 only at the time of reception of the program, i.e., the program by which image transcription reservation was carried out, which he is going to watch more positively here.

[0061] Furthermore, although the setting-out information which shows whether image transcription reservation of the next time of the program is carried out must input with the processing algorithm shown in above-mentioned drawing 8 whenever a program is completed, the program received once setting out which surely carries out [program / which was once received till termination] image transcription reservation in the next time of the program like the processing algorithm shown, for example in drawing 10 till termination by carrying out can carry out image transcription reservation automatically in the next time of the program. In this case, setting out of whether the program once received till termination surely carries out image transcription reservation of the next time of that program is performed when a viewer operates the input section 207, and that setting-out information is given to a control section 205 from the above-mentioned input section 207.

[0062] That is, it judges whether first, in step S211, while the television broadcasting receive section 202 received the desired television broadcasting program, the end time of the program received now based on the current time information given by the clock section 206 and the program information given by the program recognition section 208 came by the processing algorithm shown in drawing 10 . And if the judgment result in step S211 becomes "YES, i.e., end time," , it moves to processing of step S212 and the judgment result has not become "NO, i.e., end time," , judgment processing of this step S211 is repeated, and it waits for termination of the deed said program.

[0063] It judges whether at step S212, setting out that the program once received till termination surely carries out image transcription reservation of the next time of the program is made. If it is setting out which surely carries out image transcription reservation of the next time of the program, it will move from the program which the judgment result received till termination "YES, i.e., once," to step S215. Moreover, if the program which the judgment result received till termination "NO, i.e., once," is not setting out which surely carries out image transcription reservation of the next time of the program, it will move to step S213.

[0064] At step S213, the alphabetic signal which controls the alphabetic signal superposition section 203 and shows the text for a program reservation check is generated, and the message which demands decision making of the no which carries out image transcription reservation of the "this program of next week" of the program ended now from a viewer as shown, for example in drawing 11 is displayed by the image sound signal output section 204. By the message shown in this drawing 11 , if image transcription reservation of the "this program of next week" of the program

ended now is carried out and image transcription reservation of "1" will not be carried out again, what "0" should be inputted for from the input section 207 will be urged.

[0065] At the following step S214, it judges whether image transcription reservation of the "this program of next week" of the program ended a viewer's volition, i.e., now, shown as setting-out information inputted when the viewer who looked at the above-mentioned message operates the input section 207 is carried out. and the judgment result in step S214 -- "YES" -- namely, -- if image transcription reservation is carried out -- step S215 -- moving -- moreover, a judgment result -- "NO" -- that is, if image transcription reservation is not carried out, it will return to the above-mentioned step S211, and will wait for termination of the following program.

[0066] Furthermore, at step S215, image transcription reservation of the program of the next week of the same time amount is carried out as "this program of next week" by the same channel as the program ended now, and it returns to the above-mentioned step S211.

[0067] And the television broadcasting of a program by which program reservation is carried out by doing in this way is received automatically, and the television broadcasting receive section 202 and the image sound signal Records Department 209 are controlled by this image sound signal recording apparatus 200 by the control section 205 to record that image sound signal on a record medium 210.

[0068] Next, drawing 12 is the block diagram showing an example of the image sound signal record regenerative apparatus 300 which applied this invention.

[0069] The image sound signal record regenerative apparatus 300 shown in this drawing 12 With the television broadcasting receive section 302 which receives television broadcasting through an antenna 301 With the image sound signal Records Department 309 which records the image sound signal of the television broadcasting received by this television broadcasting receive section 302 on a record medium 310 The image sound signal playback section 311 which reproduces the image sound signal recorded by this image sound signal Records Department 309 from the above-mentioned record medium 310, The alphabetic signal superposition section 303 which superimposes an alphabetic signal on the video signal reproduced by this image sound signal playback section 311, The image sound signal output section 304 to which the image sound signal reproduced by the above-mentioned image sound signal playback section 311 is supplied through the above-mentioned alphabetic signal superposition section 303, The control section 305 which controls the above-mentioned television broadcasting receive section 302, the alphabetic signal superposition section 303, the image sound signal Records Department 309, and the image sound signal playback section 311, It comes to have the clock section 306 connected to this control section 305, the input section 307, the program recognition section 308, and the timed recording program information storage section 312.

[0070] This image sound signal record regenerative apparatus 300 forms the image voice playback section 311 in the image sound signal recording device 200 shown in

drawing 7 . It is what supplied the image sound signal which replaced with the image sound signal of the television broadcasting received by the television broadcasting receive section 302, and was reproduced by the image sound signal playback section 311 to the alphabetic signal superposition section 303. Since components other than image voice playback section 311 and timed recording program information storage section 312 are the same as the above-mentioned image sound signal recording device 200, the detailed explanation is omitted.

[0071] In this image sound signal record regenerative apparatus 300, the image sound signal Records Department 309 is controlled by the control section 305 which has an image transcription reservation function, and records the image sound signal of the television broadcasting program of the request which is received by the television broadcasting receive section 302 and by which image transcription reservation was carried out on a record medium 310. In case the above-mentioned control section 305 makes the timed recording of the image sound signal of the television broadcasting program of the request by which image transcription reservation was carried out to a record medium 310 by the image sound signal Records Department 309, it acquires the information on the program from the program recognition section 308, and the timed recording program information storage section 312 is made to memorize it. In addition, the program recognition section 308 memorizes the program information on the race card which acquired the race card by the race card acquisition section 381 in the race card storage section 382, and supplies program information to the above-mentioned control section 305 with the instruction from a control section 305.

[0072] And the image sound signal playback section 311 is controlled by the control section 305, and reproduces an image sound signal from the record medium 310 with which it did in this way and the timed recording of the image sound signal of a desired program was made. At the time of this playback mode, a control section 305 controls the alphabetic signal superposition section 303 and the image sound signal playback section 311 according to the procedure of the processing algorithm shown in drawing 13 based on the timed recording program information given from the setting-out information and the timed recording program information storage section 312 which are given from the input section 307.

[0073] That is, the above-mentioned control section 305 judges whether in step S301, the playback end time of the program which is carrying out current playback based on the timed recording program information given from the timed recording program information storage section 312 at the time of the playback mode which reproduces the image sound signal of the program of the request whose timed recording was made by the record medium 310 came first. And if it moves to processing of step S302 and the judgment result has not become "NO, i.e., playback end time," when the judgment result in step S301 reproduces "YES, i.e., that timed recording program," to the last, judgment processing of this step S301 is repeated, and it waits for playback

termination of the deed said program.

[0074] At step S302, the alphabetic signal which controls the alphabetic signal superposition section 303 and shows the text for an image transcription reservation check is generated, and the message which demands decision making of whether to record on videotape the next time of the program ended now from a viewer is displayed by the image sound signal output section 304.

[0075] The volition [the following step S303] of the viewer shown as setting-out information inputted when the viewer who looked at the above-mentioned message operates the input section 307, i.e., it judges whether image transcription reservation is carried out. and the judgment result in step S303 -- "YES" -- namely, -- if image transcription reservation is carried out -- step S304 -- moving -- moreover, a judgment result -- "NO" -- that is, if image transcription reservation is not carried out, it will return to the above-mentioned step S301, and will wait for playback termination of the following timed recording program.

[0076] Furthermore, at step S304, the program information on the race card memorized by the race card storage section 382 of the program recognition section 308 is analyzed, the broadcast time of the next time of the program ended now is extracted, program reservation of the program is carried out automatically, and it returns to the above-mentioned step S301.

[0077] And the television broadcasting of a program by which image transcription reservation is carried out by doing in this way is received automatically, and the television broadcasting receive section 302 and the image sound signal Records Department 309 are controlled by this image sound signal record regenerative apparatus 300 by the control section 305 to record that image sound signal on a record medium 310.

[0078] A viewer can see the message a user , i.e. , a viewer , urge to a viewer decision making of whether to carry out image transcription reservation of the next time for the program ended now display at the time of playback termination of a timed recording program in such the image sound signal record regenerative apparatus 300 of a configuration , and image transcription reservation can carry out easily only at carry out actuation of input the setting out information the volition operate the input section 307 and carry out image transcription reservation in the next time of the program be show . That is, in this image sound signal record regenerative apparatus 300, when the content of reservation ***** of one batch of the continuation program broadcast periodically or irregularly is reproduced and seen to the last, image transcription reservation of the next time of that timed recording program can be carried out easily.

[0079] Although it was made to output the message which stimulates decision making of image transcription reservation in this image sound signal record regenerative apparatus 300 whenever the received program was completed, it may be made to perform the processing algorithm shown in above-mentioned drawing 13 only at the

time of reception of the program, i.e., the program by which image transcription reservation was carried out, which he is going to watch more positively here.

[0080] Furthermore, although the setting-out information which shows whether image transcription reservation of the next time of the timed-recording program is carried out must input with the processing algorithm shown in above-mentioned drawing 13 whenever it reproduces a timed-recording program to the last, the timed-recording program the timed-recording program once reproduced to the last reproduced once setting out which surely carries out image transcription reservation of the next time of the program to the last by carrying out can carry out image transcription reservation automatically in the next time of the program. In this case, setting out of whether the program once received till termination surely carries out image transcription reservation of the next time of that program is performed when a viewer operates the input section 307, and that setting-out information is given to a control section 305 from the above-mentioned input section 307.

[0081] in addition -- since possibility of broadcasting the next time of the program to the same time amount by the same channel is high in continuation broadcast -- the channel same to that of image transcription reservation of the next time of a certain program as "this program of next week, i.e., the program," -- it may be made to carry out image transcription reservation of the program of the next week of the same time amount. The processing for image transcription reservation can be simplified and you may make it omit the program recognition section 308 by this, as shown in drawing 14.

[0082]

[Effect of the Invention] In the television receiving set concerning this invention, it is based on the recognition output by program recognition means to recognize initiation and termination of a program. Superimpose the text for the reservation check of the program on an image sound signal with an alphabetic character superposition means, and it is made to output from an output means at the time of termination of the program received with the receiving means. According to the program reservation setting-out information that it is inputted by the input means, the television broadcasting of the program which reserved the program and was reserved based on the recognition output by the current time information and the program recognition means which are given by the clock means is received. Since the above-mentioned receiving means and an alphabetic character superposition means are controlled by the control means to output the image sound signal of a reservation program from the above-mentioned output means A viewer looks at the message a user, i.e., a viewer, urges decision making of whether to carry out program reservation of the program ended now displayed at the time of termination of a program to a viewer. Only by performing actuation of inputting the setting-out information which shows the volition of performing program reservation from an input means, program reservation of the program which the user received to the last once can be carried out easily.

[0083] When the program which was carrying out program reservation is completed in the television receiving set concerning this invention, for example, program reservation can carry out easily in the next time of the reservation program which the user received to the last once by superimposing the text for the reservation check of the program on an image sound signal with the above-mentioned alphabetic character superposition means, making it output from an output means, and reserving the program according to the program reservation setting-out information that it is inputted by the above-mentioned input means.

[0084] Moreover, in the television receiving set concerning this invention, it can set up using the program reservation setting-out information that it is inputted into the condition of, for example, carrying out program reservation of the program received once automatically, from the above-mentioned input means, and, thereby, the actuation for program reservation can be simplified.

[0085] Moreover, in the television receiving set concerning this invention, it can set up using the program reservation setting-out information that it is inputted into the condition of, for example, carrying out program reservation of the program which carried out program reservation once automatically, from the above-mentioned input means, and, thereby, the actuation for program reservation can be simplified.

[0086] Furthermore, with the television receiving set concerning this invention, program reservation of the continuation program broadcast periodically or irregularly can be carried out by easy actuation by having the program recognition means which consists of a program information acquisition means to acquire program information, and a program information storage means to memorize the program information acquired with the above-mentioned program information acquisition means, for example.

[0087] In the image sound signal recording device concerning this invention, it is based on the recognition output by program recognition means to recognize initiation and termination of a program. Superimpose the text for the reservation check of the program on an image sound signal with an alphabetic character superposition means, and it is made to output from an output means at the time of termination of the program received with the receiving means. According to the image transcription reservation setting-out information that it is inputted by the input means, the television broadcasting of the program which reserved the program and was reserved based on the recognition output by the current time information and the program recognition means which are given by the clock means is received. Since the above-mentioned receiving means, an alphabetic character superposition means, and a record means are controlled by the control means to record on a record medium with a record means A viewer looks at the message a user, i.e., a viewer, urges decision making of whether to carry out image transcription reservation of the program ended now displayed at the time of termination of a program to a viewer. Only by performing actuation of inputting the setting-out information which shows the volition of

performing image transcription reservation from an input means, image transcription reservation of the program which the user received to the last once can be carried out easily.

[0088] When the program which was carrying out image transcription reservation is completed in the image sound signal recording device concerning this invention, for example By superimposing the text for the reservation check of the program on an image sound signal with the above-mentioned alphabetic character superposition means, making it output from an output means, and performing image transcription reservation of the program according to the image transcription reservation setting-out information that it is inputted by the above-mentioned input means Image transcription reservation of the next time of the timed recording program which the user received to the last once can be carried out easily.

[0089] Moreover, in the image sound signal recording device concerning this invention, it can set up using the image transcription reservation setting-out information that it is inputted into the condition of, for example, carrying out image transcription reservation of the program received once automatically, from the above-mentioned input means, and, thereby, the actuation for image transcription reservation can be simplified.

[0090] Moreover, in the image sound signal recording device concerning this invention, it can set up using the image transcription reservation setting-out information that it is inputted into the condition of, for example, carrying out image transcription reservation of the program which carried out image transcription reservation once automatically, from the above-mentioned input means, and, thereby, the actuation for image transcription reservation can be simplified.

[0091] Furthermore, with the image sound signal recording device concerning this invention, image transcription reservation of the continuation program broadcast periodically or irregularly can be carried out by easy actuation by having the program recognition means which consists of a program information acquisition means to acquire program information, and a program information storage means to memorize the program information acquired with the above-mentioned program information acquisition means, for example.

[0092] In the image sound signal record regenerative apparatus concerning this invention At the time of termination of the program which is reproduced from the record medium with the record playback means and whose timed recording was made Superimpose the text for the reservation check of the program on the image sound signal reproduced by the above-mentioned record playback means with an alphabetic character superposition means, and it is made to output from an output means. Image transcription reservation of the program is performed according to the image transcription reservation setting-out information that it is inputted by the input means. Based on the program information which is memorized by the current time information and the above-mentioned timed recording program information storage

means which are given by the clock means and whose timed recording was made, the television broadcasting of a program by which image transcription reservation was carried out is received. Since the above-mentioned receiving means, an alphabetic character superposition means, a storage means, and a record playback means are controlled to memorize the information on the program whose timed recording was made for the above-mentioned timed recording program information storage means while recording on a record medium with the above-mentioned record playback means. A viewer looks at the message a user, i.e., a viewer, urges decision making of whether to carry out image transcription reservation of the program ended now displayed at the time of playback termination of a timed recording program to a viewer. Only by performing actuation of inputting the setting-out information which shows the volition of performing image transcription reservation from an input means, a user can do easily image transcription reservation of the timed recording program once reproduced to the last.

[0093] In the image sound signal record regenerative apparatus concerning this invention. For example, when the program which was carrying out image transcription reservation is reproduced to the last, superimpose the text for the reservation check of the program on an image sound signal with the above-mentioned alphabetic character superposition means, and it is made to output from an output means. According to the image transcription reservation setting-out information that it is inputted by the above-mentioned input means, a user can do easily image transcription reservation of the next time of the timed recording program once reproduced to the last by performing image transcription reservation of the program.

[0094] Moreover, in the image sound signal record regenerative apparatus concerning this invention, it can set up using the image transcription reservation setting-out information that it is inputted into the condition of, for example, carrying out image transcription reservation of the timed recording program once reproduced to the last automatically, from the above-mentioned input means, and, thereby, the actuation for image transcription reservation can be simplified.

[0095] Furthermore, with the image sound signal record regenerative apparatus concerning this invention, image transcription reservation of the continuation program broadcast periodically or irregularly can be carried out by easy actuation by having the program recognition means which consists of a program information acquisition means to acquire program information, and a program information storage means to memorize the program information acquired with the above-mentioned program information acquisition means, for example.

DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the block diagram showing the configuration of the television receiving set which applied this invention. It comes out.

[Drawing 2] It is the block diagram showing the configuration of the program recognition section of the above-mentioned television receiving set.

[Drawing 3] It is the flow chart which shows the processing algorithm of the reservation processing in the above-mentioned television receiving set.

[Drawing 4] It is drawing showing an example of the message for a program reservation check in the above-mentioned television receiving set.

[Drawing 5] It is the flow chart which shows other examples of the processing algorithm of the reservation processing in the above-mentioned television receiving set.

[Drawing 6] It is drawing showing an example of the message for the program reservation check in the case of performing processing according to the processing algorithm shown in drawing 5 .

[Drawing 7] It is the block diagram showing an example of the image sound signal recording apparatus which applied this invention.

[Drawing 8] It is the flow chart which shows the processing algorithm of the reservation processing in the above-mentioned image sound signal recording apparatus.

[Drawing 9] It is drawing showing an example of the message for a program reservation check in the above-mentioned image sound signal recording apparatus.

[Drawing 10] It is the flow chart which shows other examples of the processing algorithm of the reservation processing in the above-mentioned image sound signal recording apparatus.

[Drawing 11] It is drawing showing an example of the message for the program reservation check in the case of performing processing according to the processing algorithm shown in drawing 10 .

[Drawing 12] It is the block diagram showing an example of the image sound signal record regenerative apparatus which applied this invention.

[Drawing 13] It is the flow chart which shows the processing algorithm of the reservation processing in the above-mentioned image sound signal record regenerative apparatus.

[Drawing 14] It is the block diagram showing other examples of a configuration of the image sound signal record regenerative apparatus which applied this invention.

[Description of Notations]

100 Television Receiving Set, 200 Image Sound Signal Recording Device, 200 An image sound signal record regenerative apparatus, 101,201,301 Antenna, 102,202,302 A television broadcasting receive section, 103,203,303 Alphabetic signal superposition section, 104,204,304 The image sound signal output section, 105,205,305 Control

section, 106,206,306 The clock section, 107,207,308 Input section, 108,208,308 The
program recognition section, 181,281,381 Race card acquisition section, 182,282,382
Race card storage section 209,309 The image sound signal Records Department,
210,310 A record medium, 311 The image sound signal playback section, 312
Reservation program information storage section
